

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

Please cancel Claims 1-11.

12-14 (Cancelled).

Please cancel Claims 15-25.

26-30 (Cancelled).

Please cancel Claims 31-41.

42-45 (Cancelled).

Please cancel Claims 46-56.

57-59 (Cancelled).

Please cancel Claims 60-70.

71-75 (Cancelled).

Please cancel Claim 76-86.

Claims 87-90 Cancelled.

Please cancel Claims 91-101.

Claims 102-105 (Cancelled).

Please cancel Claims 106-116.

Claims 117-120 (Cancelled).

Please cancel Claims 121-131.

Claims 132-134 (Cancelled).

Please cancel Claims 135-145.

Claims 146-150 (Cancelled).

Please cancel Claims 151-161.

Claims 162-211 (Cancelled).

Please cancel Claims 212-222.

Claims 223-248 (Cancelled).

Please cancel Claims 249-376.

377. (New) A system comprising:

a read/write channel;

hard disk controller that comprises:

a latency-independent interface that communicates with the read/write channel;

a serial control data circuit that transmits a serial control data signal including serial control data, wherein the serial control data signal has a variable number of words, wherein each of said words comprises n bits, wherein at least one of said n bits of each of said m words includes information indicating whether a subsequent word of said serial control data signal will follow; and

a data circuit that transmits or receives data under the control of the serial control data gate signal.

378. (New) The system of Claim 377 wherein, during a write operation, the serial control data signal comprises information as to whether the data is one of split sector and non-split sector.

379. (New) The system of Claim 377 wherein, during a read operation, the serial control data signal comprises information as to whether the data is one of a one of first split sector, continue split sector, last split sector and non-split sector.

380. (New) The system of Claim 377 wherein, during a read operation, the serial control data signal comprises information indicating an amount of data to be read during the read operation.

381. (New) The system of Claim 377 wherein the serial control data signal comprises a codeword size of a current sector.

382. (New) The system of claim 377 wherein the serial control data signal comprises:

information as to a start of a sync mark and a start of write padding data during a write operation.

383. (New) The system of claim 377 wherein the serial control data signal comprises information that a sync mark was detected during a read operation.

384. (New) The system of claim 377 further comprising a ready transceiver that transmits or receives a bi-directional ready signal.

385. (New) The system of claim 377 further comprising a sync mark transceiver that transmits or receives sync mark information.

386. (New) The system of claim 385 wherein during a write operation a first assertion of the sync mark information indicates a start of sync mark insertion and a second assertion of the sync mark information indicates a start of writing of padding data.

387. (New) A system comprising:

read/write means for reading and writing data to a hard disk drive;

hard disk control means for controlling that comprises:

latency-independent interface means for communicating with the read/write means;

serial control data means for transmitting a serial control data signal including serial control data, wherein the serial control data signal has a variable number of words, wherein each of said words comprises n bits, wherein at least one of said n bits of each of said m words includes information indicating whether a subsequent word of said serial control data signal will follow; and

data means for transmitting or receiving data under the control of the serial control data gate signal.

388. (New) The system of Claim 387 wherein, during a write operation, the serial control data signal comprises information as to whether the data is one of split sector and non-split sector.

389. (New) The system of Claim 387 wherein, during a read operation, the serial control data signal comprises information as to whether the data is one of a one of first split sector, continue split sector, last split sector and non-split sector.

390. (New) The system of Claim 387 wherein, during a read operation, the serial control data signal comprises information indicating an amount of data to be read during the read operation.

391. (New) The system of Claim 387 wherein the serial control data signal comprises a codeword size of a current sector.

392. (New) The system of claim 387 wherein the serial control data signal comprises information as to a start of a sync mark and a start of write padding data during a write operation.

393. (New) The system of claim 387 wherein the serial control data signal comprises information that a sync mark was detected during a read operation.

394. (New) The system of claim 387 further comprising ready transceiving means for transmitting or receiving a bi-directional ready signal.

395. (New) The system of claim 387 further comprising sync mark transceiving means for transmitting or receiving a sync mark information.

396. (New) The system of claim 395 wherein a first assertion of the sync mark information indicates a start of sync mark insertion and a second assertion of the sync mark information indicates a start of writing of padding data during a write operation.

397. (New) A method comprising:

- reading data from and writing data to a hard disk drive using a read/write channel;
- controlling that the read/write channel using hard disk controller having a latency-independent interface that communicates with the read/write channel;
- transmitting a serial control data signal including serial control data, wherein the serial control data signal has a variable number of words, wherein each of said words comprises n bits, wherein at least one of said n bits of each of said m words includes information indicating whether a subsequent word of said serial control data signal will follow; and
- transmitting or receiving data under the control of the serial control data gate signal.

398. (New) The method of Claim 397 wherein, during a write operation, the serial control data signal comprises information as to whether the data is one of split sector and non-split sector.

399. (New) The method of Claim 397 further comprising including information in the serial control data signal as to whether the data is one of a one of first split sector, continue split sector, last split sector and non-split sector during a read operation.

400. (New) The method of Claim 397 further comprising including information in the serial control data signal indicating an amount of data to be read during the read operation during a read operation.

401. (New) The method of Claim 397 further comprising including information in the serial control data signal indicating a codeword size of a current sector.

402. (New) The method of claim 397 further comprising including information in the serial control data signal as to a start of a sync mark and a start of write padding data during a write operation.

403. (New) The method of claim 397 further comprising including information in the serial control data signal indicating that a sync mark was detected during a read operation.

404. (New) The method of claim 397 further comprising transmitting or receiving a bi-directional ready signal.

405. (New) The method of claim 397 further comprising transmitting or receiving sync mark information.

406. (New) The method of claim 405 further comprising:

indicating a start of sync mark insertion using a first assertion of the sync mark information during a write operation; and

indicating a start of writing of padding data a second assertion of the sync mark information during the write operation.

407. (New) A data transmission system, comprising:

a hard disk controller comprising:

a serial control transmitter circuit that transmits a serial control data signal; and

a first data transceiver circuit that transmits or receives data under the control of the serial control data signal; and

a read/write channel comprising:

a serial control receiver circuit that receives the serial control data signal; and

a second data transceiver circuit that transmits or receives the data under the control of the serial control data signal,

wherein, during a write operation, the serial control data signal comprises information as to whether the data is one of split sector and non-split sector, and

wherein, during a read operation the serial control data signal comprises information that the data is one of non-split sector, first split sector, continue split sector and last split sector.

408. (New) The data transmission system of claim 407 wherein the serial control data signal comprises an amount of the data to be written during a write operation.

409. (New) The data transmission system of claim 407 wherein the serial control data signal comprises an amount of the data to be read during a read operation.

410. (New) The data transmission system of Claim 407 where the serial control data signal comprises a codeword size of a current sector.

411. (New) The data transmission system of claim 407 wherein the serial control data signal comprises information if a succeeding serial control data is a continuation of a current serial control data.

412. (New) The data transmission system of claim 407 wherein, during a write operation, the serial control data signal comprises information as to a start of a sync mark and a start of write padding data, and wherein, during a read operation, the serial control data signal comprises information that a sync mark was detected.

413. (New) The data transmission system of claim 407 wherein the first component further comprises a first sync mark transceiver that transmits or receives sync mark information and wherein the second component further comprises a second sync mark transceiver that transmits or receives the sync mark information.

414. (New) The data transmission system of claim 413 wherein during a write operation a first assertion of the sync mark information indicates a start of sync mark insertion and a second assertion of the sync mark information indicates a start of writing of padding data.

415. (New) The data transmission system of claim 407 wherein the serial control data signal has a variable number of words.

416. (New) The data transmission system of claim 415 wherein each of said words comprises n bits, wherein at least one of said n bits of each of said m words includes information indicating whether a subsequent word of said serial control data signal will follow.

417. (New) A data transmission system, comprising:

control means for controlling a hard disk drive comprising:

serial control transmitter means for transmitting a serial control data signal; and

first data transceiver means for transmitting or receiving data under the control of the serial control data signal; and

read/write means for reading and writing and comprising:

serial control receiver means for receiving the serial control data signal; and

second data transceiver means for transmitting or receiving the data under the control of the serial control data signal,

wherein, during a write operation, the serial control data signal comprises information as to whether the data is one of split sector and non-split sector, and

wherein, during a read operation the serial control data signal comprises information that the data is one of non-split sector, first split sector, continue split sector and last split sector.

418. (New) The data transmission system of claim 417 wherein the serial control data signal comprises an amount of the data to be written during a write operation.

419. (New) The data transmission system of claim 417 wherein the serial control data signal comprises an amount of the data to be read during a read operation.

420. (New) The data transmission system of Claim 417 where the serial control data signal comprises a codeword size of a current sector.

421. (New) The data transmission system of claim 417 wherein the serial control data signal comprises information if a succeeding serial control data is a continuation of a current serial control data.

422. (New) The data transmission system of claim 417 wherein, during a write operation, the serial control data signal comprises information as to a start of a sync mark and a start of write padding data, and wherein, during a read operation, the serial control data signal comprises information that a sync mark was detected.

423. (New) The data transmission system of claim 417 wherein the first component further comprises first sync mark transceiving means for transmitting or receiving sync mark information and wherein the second component further comprises second sync mark transceiving means for transmitting or receiving the sync mark information.

424. (New) The data transmission system of claim 423 wherein during a write operation a first assertion of the sync mark information indicates a start of sync mark insertion and a second assertion of the sync mark information indicates a start of writing of padding data.

425. (New) The data transmission system of claim 417 wherein the serial control data signal has a variable number of words.

426. (New) The data transmission system of claim 425 wherein each of said words comprises n bits, wherein at least one of said n bits of each of said m words includes information indicating whether a subsequent word of said serial control data signal will follow.